

- 1.Create a Generator function to replicate range()
- 2.Create a Recursive function to replicate range()
- 3.Create a Recursive and lambda function - Greatest Common Divisor (GCD)
- 4.Create A module using an Editor / IDE

PROGRAM:

```
1.def my_generator(n):

    # initialize counter
    value = 0

    # loop until counter is less than n
    while value < n:

        # produce the current value of the counter
        yield value

        # increment the counter
        value += 1

# iterate over the generator object produced by my_generator
for value in my_generator(3):

    # print each value produced by generator
    print(value)

2.def factorial(x):
    """This is a recursive function
    to find the factorial of an integer"""

    if x == 1:
        return 1
    else:
        return (x * factorial(x-1))

num = 3
print("The factorial of", num, "is", factorial(num))

3.def gcd(x , y):
    if y == 0:
        return x
```

```
    else:
        return (y, x % y)

num_one = int(input('Enter a value for x: '))
num_two = int(input('Enter a value for y: '))
if num_two == 0:
    print(num_one)
else:
    print(gcd(num_two))
```